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COAL NONFATAL

UNITED STATES
DEPARTMENT OF LABOR
MINE SAFETY AND HEALTH ADMINISTRATION

District 9

REPORT OF INVESTIGATION
(Underground Coal Mine)

NONINJURY COAL MINE OUTBURST (BOUNCE) ACCIDENT

L. S. Wood Mine (ID No. 05-00300)
Mid-Continent Resources, Inc.
Redstone, Pitkin County, Colorado

September 9, 1980

by

Lee H. Smith
Coal Mine Inspector

Originating Office - Mine Safety and Health Administration
Drawer J. 575 East First South, Price, Utah 84501
Jensen L. Bishop, Subdistrict Manager

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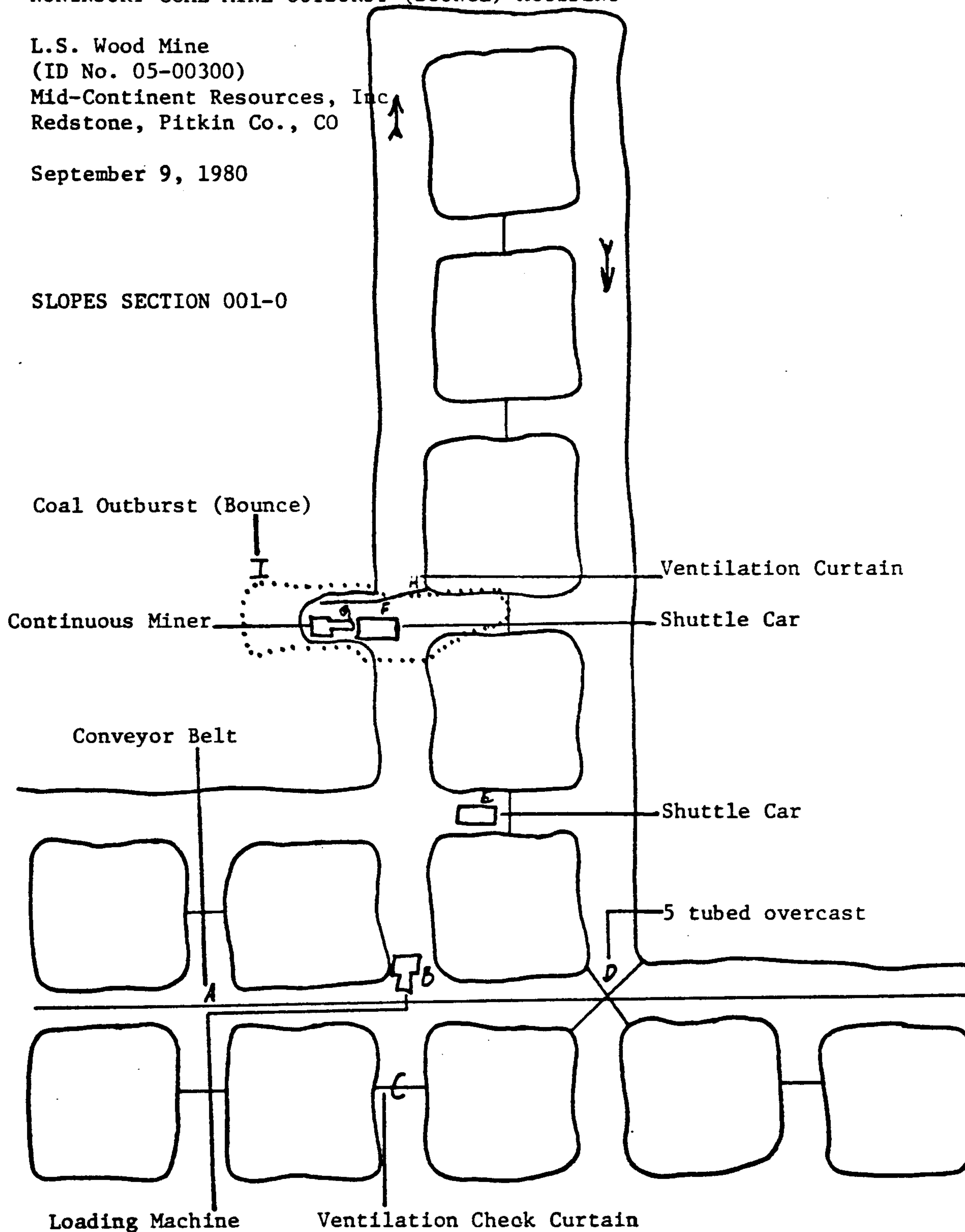
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SLOPES SECTION 001-0



(Not drawn to scale.)

Abstract of Investigation

U.S. Department of Labor
Mine Safety and Health Administration



Authority —

This report is based on an investigation made pursuant to the Federal Mine Safety and Health Act of 1977, Public Law 95-173, as amended by Public Law 95-104.

SECTION A — IDENTIFICATION DATA

1. Title of investigation: Noninjury Outburst
(Bounce)
2. Date MESA investigation started: September 9, 1980
3. Report release date: September 23, 1980
4. Mine: L. S. Wood
5. Mine ID number: 05-00300
6. Company: Mid-Continent Resources, Inc.
7. Town, County, State: Redstone, Pitkin Co., CO
8. Author(s): Lee H. Smith

SECTION C — MINE ORGANIZATION

18 Mine Safety and Health Administration
Coal Mine Health and Safety District No.: 9
Address: Drawer J, Price, UT 84501

SECTION B — MINE INFORMATION

9. Daily production: 1,345 Tons
10. Surface employment: 6
11. Underground employment: 101
12. Name of coal bed: Coal Basin "B"
13. Thickness of coal bed: 84 inches

SECTION D — MINE OPERATING DATA

14. Industry: 11.50
15. This operation: 18.95
16. Training program approved: Yes
17. Mine Profile Rating: 741

SECTION E — SUMMARY

On Tuesday, September 9, 1980, at 10:20 a.m., an outburst of coal (bounce) occurred in the 001-0 slopes section of Mid-Continent Resources, Inc.'s, L.S. Wood Mine. The outburst occurred while the mining crew was cleaning the mine floor in the crosscut being driven from the No. 5 slope to the No. 4 slope. The accident occurred because of the overburden which is in excess of 2,000 feet in thickness and exerts extreme pressure on the coal bed. No personal injury was suffered.

SECTION F — MINE ORGANIZATION

Company officials:	Name	Address
19. President:	John A. Reeves, Sr.	P.O. Box 158, Carbondale, CO 81623
20. Superintendent:	Tom Scott	P.O. Box 158, Carbondale, CO 81623
21. Safety Director:	Ron Henderson	P.O. Box 158, Carbondale, CO 81623
22. Principle officer—M & S:	Tom Scott	P.O. Box 158, Carbondale, CO 81623
23. Labor Organ.:	Richard Lane	0526 Hwy. 133, Carbondale, CO 81623
24. Chairman—M & S Committee:	Richard Lane	0526 Hwy. 133, Carbondale, CO 81623

Commentary

On Tuesday, September 9, 1980, at 7:00 a.m., the 001-0 slopes section crew under the supervision of Dewey King, section foreman, entered the mine and traveled to the working section arriving about 7:30 a.m. King conducted an examination of the section and then assigned duties and work locations to the crew. The mining crew began grading down the No. 5 slope toward the crosscut being driven from this slope to the No. 4 slope. One five foot cut was taken from the ventilation side of the face and another one from the other side. Normal mining activities continued until 10:15 a.m. At that time the uphill rib sloughed resulting in some loose coal along the ribline and on the mine floor. King ordered the mining crew to clean up the sloughage. Richard Garner, miner operator, positioned the machine to begin the cleanup and Chris Bostelman drove his shuttle car behind and under the tail boom of the continuous miner. The only people to observe the actual mining operation were King and Garner. The mining machine is operated remotely as is the conveyor tram of the shuttle car. While this was being done, the rest of the crew stood approximately 20 feet away observing the operation. At 10:20 a.m., a rapid succession of noise and vibration occurred resulting in a coal outburst. Upon hearing the first bounce, the entire crew started running uphill away from the rapidly flying coal. The bounce blew down and covered the ventilation line curtain, buried the continuous miner and shuttle car and covered the entire section with a thick coating of float coal dust. George Small, mine foreman, was approximately 500 feet away at the mechanics shop when he heard and felt the bounce. He immediately went to the slopes section to offer help. Small found four members of the crew that had made it to fresh air and then began a search for the other two members. He spotted two lights in the dense dusty atmosphere and turned on the valve controlling the four inch air line thereby forcing fresh air toward the men. Immediately after accounting for all the crew members, Small shut off the section power center and dangled off the area. The mine superintendent and all other sections of the mine were notified of the outburst by telephone and return air courses were tested for methane gas. After this was accomplished the supervisor of the Glenwood Springs, CO, MSHA Field Office was notified of the accident.

Discussion and Evaluation

The investigation revealed the following factors relevant to the occurrence of the outburst of coal (bounce):

1. The coal outburst caused the withdrawal of miners and disrupted regular mining activity for more than an hour.
2. The coal outburst affected ventilation.
3. High concentrations of methane gas were liberated during and after the outburst.
4. The crosscut measured 18 feet 5 inches wide, 7 feet 4 inches high, and approximately 40 feet long prior to the outburst. After the outburst, it measured 26 feet 9 inches wide, 7 to 14 inches high, and approximately 75 feet long.

5. The outburst blew out of the crosscut and impacted on the north rib and permanent stopping located in the crosscut between No. 5 and No. 6 slopes.

6. Both the continuous miner and shuttle car were completely buried by the outburst. Thirty-eight shuttle car loads of coal, five ton each, were loaded to uncover the shuttle car. At this time the continuous miner was still buried.

7. Float coal dust one to three inches in depth was deposited on the mine floor for approximately 100 feet uphill distance and 200 feet downhill distance.

8. According to the mining crew, visibility was zero throughout the section and at a distance of 300 feet away it was difficult to breathe.

9. The overburden in the slopes section is in excess of 2,000 feet in thickness. Due to this natural condition, extreme pressure is exerted on the coal bed which creates severe rib sloughage throughout the section and coal outbursts (bounces) are often experienced during development operations.

10. The solid coal face was not being relieved of stress by any method. The previous method of volley firing the solid face had been discontinued in this section.

11. According to the section foreman, the outburst occurred while the mining crew was cleaning the mine floor, not while they were mining in the solid face. However, mining in the solid face had just been completed and it is believed the vibration from the mining machine as it began a cleanup operation, triggered the outburst.

12. The continuous miner and the conveyor tram of the shuttle car are operated remotely. This method allowed the operators to position themselves in a safe location and probably saved the lives of three persons.

13. The coal outburst blew down the ventilation line curtain installed in the working place. George Small turned on the air line, forcing fresh air toward the accident scene. These two factors allowed some ventilation to take place in the crosscut where the outburst occurred. The line curtain was blown down and buried, however instead of short-circuiting the ventilating current, the intake air was passing over the crewmen and carrying the methane gas and dust away from them into the return approximately 300 feet away.

Findings of Fact

Evidence and findings of the investigation indicated there were no violations of Title 30 CFR which contributed to the occurrence of the accident. However, a 107(a) order of withdrawal was issued because of the presence of methane gas which was in excess of 1.5%.


Conclusion

The accident occurred because of the overburden which is in excess of 2,000 feet in thickness and exerts extreme pressure on the coal bed. A contributing factor was that advance stress relief was not being practiced at the time of the occurrence.

Respectfully submitted,


Lee H. Smith

Approved by:


Jensen L. Bishop
Subdistrict Manager

APPENDIX

The investigation was conducted by the Mine Safety and Health Administration and those persons present during the investigation were:

Mid-Continent Resources, Inc. Officials

Tom Scott	Superintendent
George Small	Mine Foreman
Dewey King	Section Foreman
Dan Mortensen	Section Foreman
Rodney Pretti	Maintenance Foreman
Ron Henderson	Safety Department

Mid-Continent Resources, Inc. Employees

Dennis Brown	Representative of the Miners
Richard Garner	Continuous Miner Operator
Mason Hannah	Continuous Miner Operator Helper
Chris Bostelman	Shuttle Car Operator
Alan DeCrow	Shuttle Car Operator
Jim Zigner	Loader Operator

Mine Safety and Health Administration

Lee H. Smith	Coal Mine Inspector
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